CIVIL PRO
AN ISO 9001 : 2008 COMPANY & ACCREDITED LABORATORY AS PER ISO/IEC 17025:2017
4, 7TH MAIN MALLESWARAM, BANGALORE -3
Certificate No.: TC-5548

To,

Date: 29-11-2021

ASSISTANT EXECUTIVE ENGINEER
PROJECT SUB DIVISION,
BBMP
BANGALORE

Dear Sir,

Sub: M/s. Civil Pro Services for the work of "INSTALLATION OF RO PLANT AND DRILLING BOREWELLS AND ACCESSORIES IN WARD NO.05".

Ref: 1. Work Order No: EE(Project)/Ynk Zone/WO/163/2020-21
2. Job code: 005-21-000013

We are here with forwarding to Sri.Santhosh Kumar K R , #04, Samrudhi A V R Block, 1st A main, Virupakshapura, Bangalore-97. First & Final Bill duly verified and certified that the work is satisfactory and for a Gross Value of Rs. 1,96,95,283.72/- (Rs. One Crore Ninety Six Lakhs Ninety Five Thousand Two Hundred Eighty Three and Seventy Two Paisa Only).

Thanking you,

Yours faithfully,

CIVIL Pro Sig..... Date.....

For Civil Pro

R. KARTHIK RECHAN B.E, M.S (U.S.A)
PRINCIPAL CONSULTANT
CIVIL PRO

Attachments PMC Compliance report

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

Scanned by TapScanner

CIVIL PRO
AN ISO 9001 : 2008 COMPANY & ACCREDITED LABORATORY AS PER ISO/IEC 17025:2017
4, 7TH MAIN MALLESWARAM, BANGALORE -3
Certificate No.: TC-5548

NAME OF WORK:-Installation of RO Plant and Drilling Borewells and Accessories in Ward No.05

Name of Client : EXECUTIVE ENGINEER, PROJECT DIVISION,BBMP, BANGALORE

Contractor/ Agency: Sri. Santhosh Kumar K R, #04, Samrudhi AVR Block, 1st A Main, Virupakshapura, Bangalore-97

Tender Contract Price Rs 1,96,95,283.72/-

Date Of Inspection : 29-11-21

Status Of Bill : First & Final Bill

In the Presence of : a) Assistant Engineer, Project Sub division, BBMP, Bangalore
b) R. Karthik Rechan, Partner, M/S Civil Pro, BANGALORE

PMC COMPLIANCE REPORT

Sl. No.	Description of work	Comments/Observations
1	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
2	Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregates @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
3	Providing and constructing granite / trap / basalt size stone masonry in foundation cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone

CIVIL Pro
Sig.....
Date.....

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

Scanned by TapScanner

4	Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
5	Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
6	Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates :@0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation,plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
7	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for sides and soffits of beams, beam haunchings, cantilever girders, bressumers and lintels not exceeding 1m in depth including cost of all materials, labour complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
8	Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.460cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundationfor footing ,pedestals ,retaining walls ,retern walls , walls (any thickness) including attached plasters, columns, pillars, posts, struts, buttresses, bed blocks, anchor blocks, and plinth etc., including cost of all materials, labour, HOM of machinery, curing, complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
9	Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone

CIVIL Pro
Sig.....
Date.....

Scanned by TapScanner

10	Providing and constructing load bearing wall with solid concrete blocks of size 400x200x200 mm having block density not lessthan 1800 kg/m3 and having a minimum average compressive strength 5.00 N/mm2 confirming to IS 2185 (Part) : 2005 and constructed with CM 1:4 , as per IS 2572:2005 including cost of all materials, labour charegs, scaffolding, curing complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
11	Providing 20mm thick cement plaster in single coat with cement mortar 1:3, to stone masonry & concrete surface including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
12	Fabricating, supplying and erecting M.S. TubularTruss of span upto 10m. The bottom and top member is provided with 50x50x6mm double equal angles, welded back to back and in between top and bottom line, in areas of mid section is provided with 50x50x6mm equal single angle for vertical and inclined members and at supporting ends 40x40x5mm single angle is provided. All the members are welded together with 6mm gusset plate as per Drawing. The entire truss is anchored in RCC column by using 4 Nos. of M.S. anchor bolts at each support, with 10mm thick base plate and shoe plate.The work includes cutting, straightening, placing in position of M.S angle and wleding wherever necessary, and applying one coat of red oxide primer coat to all themembers including cost of all materials, labour charges, and hire charges of machineries for cutting, welding, grinding and erection equipments, with all lead and lift, transportation, etc., complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
13	PROVIDING TRAPEZOIDAL PROFILED SHEET Providing and installing of pre painted Galvolume iron Trapezoidal profiled sheet of approved make 1060 mm width (1000 mm cover width), 28-30 mm crest height with crest distance of 200 mm c/c with 2 ribs at the centre for stiffening. The total coated thickness (TCT) of the sheet will be 0.47 mm +/- 0.02 mm tolerance Zinc-Alu Alloy coating AZ150 gsm as per ASTM 1397/A755-550 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 20-22 microns using self drilling/self tapping screws of 25 mm length, to be fixed over the existing purlins, rafters, channels and trusses.complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

CIVIL Pro
Sig.....
Date.....

Scanned by TapScanner

14	Providing, fabricating, assembling and fixing in position aluminium doors using following aluminium mat finish or glossy finish, outer frame plain section 101.6x44.45mm thickness 3.18mm, section weight 2.404 kg/m, door shutters vertical section 44.62x44.45mm thickness 3.18mm, section weight 1.505kg/m, top section 47.62x44.45mm thickness 3.00mm, section weight 1.426kg/m bottom section 114.3x44.45 thickness 3.18mm, section weight 2.646kg/m, door central section 49.91x44.45mm thickness 3.00mm, section weight 1.495 kg/m glazing clips 19x17.3x11mm thickness 0.9mm section weight 0.124kg/m; aluminium sections cut to length joint metred cornersgrinded, the shutters pivoted opening arrangement with heavy duty aluminium alloy automatic door closures floor mounted, providing and fixing standard approved accessories, such as aluminium handle for full width or length, tower bolts, lock, pivots: P.V.C. or rubber gasket with 5.5m. thick plain glass for top and bottom panel; aluminium sections treated for removal of any rust and prevention of further rust formation, and coated with greasy materials for non-adherance of mortars or any other sticky materials; the assembled frame fitted with the corner angles, strips and fitted with screws, rawl plugs or teakwood gutties to R.C.C. columns or masonry on sides. beams and flooring in bottom. including cutting, chistling and making good with cement mortar to match the surface; all the frames throughly cleaned free from rust, scale, or dirt including cost of materials, fixtures, labour and HOM of machinery complete as per specifications. section anodized to 12-15 micronscomplete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

CIVIL Pro
Sig.....
Date.....
BANGALORE

Scanned by TapScanner

15	Providing and fixing in position aluminium windows and ventilators as per approved drawings with sliding shutters using three track window frame of size 92x31.75mm bottom section 1.3mm thick, weight 1.07kg/m; sides and top sections 1.3 mm, thick, weight 0.933 kg/m.shutter frame section comprising top and bottom section of size 40mmx18mm, wall thickness 1.25mm. weight 0.417 kg./m. shutter side outer 40mmx18mm. wall thickness 1.25mm. weight 0.417 kg/m, shutter interlock section 40mmx26.7mm wall thickness 1.1 mm. thick, weight 0.469 kg/m, the shutters mounted on nylon rollers with approved quality of fixtures such as aluminium handles tower bolts etc.; providing and fixing 5.5mm. thick plain glass for shutters fitted with rubber beading all aluminium sections including cutting to required length, joints mitred subdividing the frame tenonned and rivetted, in the assembled frame, stiffened with end clips for corners, angles etc., and fixed to the walls, lintels, floor beams/cills as the case may be, with necessary steel screws, raul plugs or teak wood gatties including cutting masonry or concrete and making good the original surface using cement mortar. using aluminium section powdered coated to a minimum of 60-70 microns with exterior durable pure polyester grade powder of approved quality.complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
16	Providing flooring with 60 cms.x 60 cms. size Vitrified glazed tiles of approved quality & make, fixed on top of existing flooring fixed with suitable adhesive, including cutting the tiles to the required size and fixing etc., complete. complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
17	Providing and fixing pull and push type rolling shutters of approved make out of 18 guage, 75mm wide cold rolled steel laths of convex corrugation, with side guides and bottom rail, with interlocking arrangements for steel laths by means of alternate clips, suspension shaft with High tension coil type springs two numbers, mounted on specially designed pipe shaft, with bracket plates, guide channels, ball bearing arrangements, for inside & outside locking with push & pull operations complete including pulling hooks, 4Nos. handles with all fittings and accessories, painted with a coat of red lead paint (without top cover) cost of materials, labour, HOM of machinery complete as per specifications. Shutter size 3mx2.8 m complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

CIVIL Pro
Sig.....
Date.....

Scanned by TapScanner

18	Providing and fixing M.S.grill work for windows and ventilators weighing 21kg/sqm using M.S. flats, or M.S. square rods, or combination of M.S. flats and square rods as per approved design, drawing including cutting steel sections and welding the same to required pattern with a coat of red lead primer, cost of materials, fixtures, labour and HOM of machinery complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
19	Providing and laying flooring using prepolished, water cut/ gang saw 19mm thick granite laid over bed of 20mm thick CM 1:4 and jointed with neat cement slurry mixed with pigments to match shade of granite slabs including laying of POP on finished surface and claning the surface including cost of all meterials and labour etc, complete as per specifications.using solver grey granite/multy red/ruby red/black/Hassan green granite of width not less than 1200mm, mm.complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
20	Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to give an even shade after throughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications, with primer complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
21	Providing and applying painting in two coats with plastic emulsion paint of approved brand on wall surface to give an even approved shade after thoroughly brushing the surface, free from mortar drops and other foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
22	Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specificationscomplete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
23	Conveying the excavated earth by private vehicle up to 15KMS including lead and lift loading unloading etc., complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
24	Providing and placing on terrace, polyethylene water storage tanks with manhole lid and suitable locking arrangements, making holes of suitable diameter for inlet, outlet and over flow pipes, including cost of all materials, labour, transport charges, HOM of equipments and testing complete as per specifications.(For 1000 litre capacity) complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone

CIVIL PRO Sig..... Date.....

Scanned by TapScanner

25	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete. (Concealed work including cutting chases and good the walls etc.)25MM DIAcomplete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
26	Providing and fixing in position brass gate valve with C.I wheel of approved quality (screwed end) 25mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. Specification No.KBS 13.2.6 / 13.3 complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
27	SKID SS 202, PUMP CRI1HP, VESSEL-1354 PENTAIR, PRESSURE GAZE 10KGS NORMAL, MPV-1"NB FRONT FACE FILTER, HOUSING 20"JUMBO-1", SPUN 20 JUMBO, PUMP CRI 2 -180-3, PT-8040 FRP PANTHER, MEMBRANE DOW 8040, CONTROLL PANNEL 1X3 (SUPER), ROTAMETER 120-1680 ACRYLIC, ROTAMETER 400-2000 ACRYLIC, PRESSURE GAZE GLYSERINE - 21KG PANTHER, BRINE CON VALVE 3/4, ACRYLIC SHEET, LPS DENFOS, HPS DENFOS, DOSINGPUMP DOSE, SAND, CHEEPS, ACTIVATED CARBON INDUSTRIAL, ANTI DOSING CHEMICAL, HANDLE VALVE, ASSEMBLING AND COMMISSIONING, TANK SS304 1000LTR INCLUSIVE OF AUTOMATED COIN MACHINE complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
28	Open conduit System: Supplying heavy gauge PVC conduit pipe ……dia confirming to IS 2509 with suitable size bends, plugs in case of RCC ceiling and RCC wall stone structure or rawl plugs in case of brick walls and cement plastering damaged portion using heavy gauge saddles at an interval of 700mm using WF screws.a) 19/20mm dia 2mm thick chaper -1complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
29	Supplying and flush mounting teak wooden box without front plank, made of not less than 15mm thick wood, after due groove cutting, necessary masonry patch work complete. d)8''x6''x3''(203x152x76mm) complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

CIVIL Pro
Sig.....
Date.....
BANGALORE

Scanned by TapScanner

30	Point wiring using copper wire with switch Supplying and wiring adopting loop system in existing PVC Conduit/casing caping using Copper PVC insulated multi strand 2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixied on the exisiting plastic sheet /gang box, the pther end of the wires shall be terminated with sufficient loose length in a wood/PVC round block.complete for each outlet. I. Point wiring using class A materials a) Short point upto 3Mtr from tapping point to out let via switch chaper-1 complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
31	Point wiring using copper wire with switch Supplying and wiring adopting loop system in existing PVC Conduit/casing caping using Copper PVC insulated multi strand 2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixied on the exisiting plastic sheet /gang box, the pther end of the wires shall be terminated with sufficient loose length in a wood/PVC round block.complete for each outlet. I. Point wiring using class A materials a) Short point upto 3Mtr from tapping point to out let via switch chaper-1 Medium point above 3Mtr upto 6Mtr from tapping pointr to out let viaswitch complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
32	Point wiring using copper wire with switch Supplying and wiring adopting loop system in existing PVC Conduit/casing caping using Copper PVC insulated multi strand 2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixied on the exisiting plastic sheet /gang box, the pther end of the wires shall be terminated with sufficient loose length in a wood/PVC round block.complete for each outlet. I. Point wiring using class A materials Long point above 6Mtr upto 10Mtr from tapping point to out let via switch 3complete as per specifications and directions of the Engineer in chargec	Work done upto the Billed Quantity and the Quality is satisfactory
33	Supplying 6A flush/projected type socket and a 6 amps flush/ projected type SP switch either surface/flush mounting in a exisiting gang box or in a 4mm thick plastic sheet and fixing over a flush mounted wooden box and wiring using necessary capacity wires as required. b) 6Amps 3/5 way chapter-1 p.no.15.i.no.3.1.1complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
34	Wiring for lighting/power circuit using one of FLRS PVC insulated 1100v grade, multis and CopperWITH LOW conductor single core cable in open or consealed system of wiring.I Group A Materials.a) 1.5 sqmm chapter no 1complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

CIVIL Pro
Sig.....
Date.....

Scanned by TapScanner

35	Wiring for lighting/power circuit using one of FLRS PVC insulated 1100v grade, multis and CopperWITH LOW conductor single core cable in open or consealed system of wiring.I Group A Materials.2.5Sqmm p.no.6.i.no.2.5.21complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
36	Wiring for lighting/power circuit using one of FLRS PVC insulated 1100v grade, multis and CopperWITH LOW conductor single core cable in open or consealed system of wiring.I Group A Materials.c4 sqmm p.no.6.i.no.2.5.3 complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
37	Supplying 4mm thick plastic sheet with necessary niches for fixing switches, regulators etc., and fixing on exisiting wood or metal box using N.F.screws complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
38	Supplying and fixing pbbc bakelight stright or slant batton holderand wiring within 60v/230volts lamp group A chapter -2 complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
39	Supplying and fixing retrofit type -PL-LED lamp…W LED linear Source with CCT 6500 degree K, CRI>70%efficacy>80 lumen per watt,life>25000 burning hours and compliance to IS 10322/IEC 60598,LM 79 and LM80.The LED are driven by HF electronicdriver integrated in the system, with PF>0.95, power loss Should <5% of lam Wattage.,short Circuit and open circuit Protection to be integrated Circuit, THD less than 20%,life as per LM79.the operating input voltage should be between130 t 275 volts.Tested by NABL/CPRI accredited laboratory with 2 years Warranty agnist any manufacturing defect working under standard electrical condition.18-20Watts complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
40	Supply wall mountaing fan suitable to operate of single phase -230v A.C supply 400mm sweep a.group A chapter 3.complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

CIVIL Pro
Sig.....
Date.....
ANGALORE

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

Scanned by TapScanner

41	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source.complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
42	Supplying and fixing of T5 Fluorescent Tube with 14W power consumption with low 3mg Mercury content & below 40% glass content than T8 lamp & 20% less phosphor coating than T8 with initial lumen on 1350 (for 3000-6500 deg Kelvin), rated Avg life (12 Hr. Cycle) of greater than 35000 burring hours. Operating voltage range from 180V to 265V, 50Hz AC power Supplycomplete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
43	Supply and fixing polished wood board made of not less than 15mm thick plank on both sides with plank made out of not more than 2 pices and fixing the same to the wall using tapered inverted woode plug screws etc., a) 20"x20"2.5" chapter complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
44	Supplying and fixing of Procelain fuse channel with cut out on exisiting wooden/panel using necessary nuts, bolts and washers etc., complete.a) 32Amps champter 5 complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Ban... 92

CIVIL Pro
Sig.....
Date.....

Scanned by TapScanner

45	Supply of an load charge over switches 4poles 415v 50Hz A.C supply with AC23A duty a) up to 63amps Groups A chapter 5.complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
46	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and C type curve indicator ON/OFF Energy cross 3 with short circuit breaking capacity of 10K and complete wiring as required. e)6-32amps TPN . Group A chapter 5complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
47	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and C type curve indicator ON/OFF Energy cross 3 with short circuit breaking capacity of 10K and complete wiring as required. e)6-32amps TPN . Group A chapter 5 6-32amps TPN complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
48	Supplying fixing and wiring Electronic10 to 40 amps Three phase 4wire class -1 Accuracy energy meter Group A chapter 5 complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
49	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipments on the meter board using 40mm dia 2.90 thick Gl pipe 2.5 mtr long buried in a pit … The pit should be filled with equal proprotion of salt and charcoal 150mm alround the pipe to complete depth. the connection form the pipe to the conduit etc, is to be established through Gl wire of size as oer ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and checknuts etc, the pipe shall have 16 through holes of 12mm dia.chapter 9. complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
50	Supplying and running of GI/Copper strips for grounding connections using necessary fixing material as required GI strip 25x3mm complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
51	Supplying of LT UG cable having aluminium conductor PVC insulated, sheathed, galvanished, steel wire/steel tap armoured cable with PVC outer sheating 1.1 KV class.I. Class 'A' PVC Cable.d) 4 core 16 sqmm chapter 9. complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
52	Labour charges for lying of 1.1 KV class UG cable when supplied agency in existing trench Gl pipe / stoneware pipe / on wall /on pole as required. I. In existing trench/duct.a) 6 sqmm to 16 sqmm complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

CIVIL Pro
Sig.....
Date.....

Scanned by TapScanner

53	Digging of trench of 0.6 m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc.,complete. .a) In soil (ordinary) complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
54	Supplying and fixing of class A (medium duty) GI pipe of wall thick ness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV class. a) 40mm complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
55	Supplying &fixing L.T.cast iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers ect.b) complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
56	Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Hand pump, MWS of P.W.S.S by vertical electrical sounding by adopting Venner or Schlumberger's method, including reconnaissance survey of geological formation, Gerophysical investigation of existing Ground Wate in the vicinity, its quality & acceptability of the users indicating the location of site, recommended depth of casing pipe required to seal the top unconsolidated formation including an extra depth of 1.0 meter in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instrument and accessories to work site., engaging techinical personal and labour required etc complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
57	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

CIVIL Pro
Sig.....
Date.....
BANGALORE

Scanned by TapScanner

58	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc.,50-100mtrs complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
59	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc.,100-150mtrs complete as per	Work done upto the Billed Quantity and the Quality is satisfactory
60	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc.,150-200mtrs complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
61	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., 200-250mtrs complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore

CIVIL Pro
Sig.....
Date.....

Scanned by TapScanner

62	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., 250-300mtrs complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
63	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., 300-350mtrs complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
64	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., 350-400mtrs complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
65	Supply of ISI mark 175 mm nominal bore medium black ERW casing pipe of 5 mm thick black electric resistance continuous welded mild steel tube material confirming to IS 1387 / 1993 & manufactured from hot rolled steel skelp / stripes in random length of 4 to 7 mts both ends threaded confirming to IS 554 / 1985, one end fixed with a socket and the other and with a plastic protection end (including of all taxes) ,with all lead and lift, loading, unloading and labour charges etc., complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
66	Providing and fixing 250mm dia PVC Pipe and as per specification and directions.(BWSSB SR 13-14complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

CIVIL Pro Sig

Scanned by TapScanner

67	175mm dia M.S. Casing cap(P.No-111,I.No-85,PRED 12-13 SR)complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
68	M.S. Casing pipe collars 'C' Class (P.No-111,I.No-86,PRED 12-13 SR)complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
69	Fabrication supplying and mounting MS box of 16 SWG suitable for floor /wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished 2 coats of red oxide primer paint and finally finished with approved colour enamelled metal paint etc., complete box of 21600 sqcm with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work.)complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
70	Labour charges for erection as new /repaired submercible pumpset allong with GI pipe (32/50mm) cable (new submercible pumpset if required will be supplied by the department free of cost and released pumpset shoud be handed over to department including transportation (Each lenth =6.00))complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
71	Erection of combined panel board meter board with all necessary materials and labour including providing CC 1:3:6 foundation bed etc,. Complete for basement out door type.(MR)complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
72	Supplying and fixing of Porcelain fuse channel with cut out on existing wooden / panel using necessary nuts, bolts and washer etc.,with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
73	Supplying and fixing of Porcelain fuse channel with cut out on existing wooden / panel using necessary nuts, bolts and washer etc.,with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
74	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete sutting road surfacescomplete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

CIVIL Pro
Sig.....
Date.....

Scanned by TapScanner

75	Supplying and fixing of class A GI pipe on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV class 40mm complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
76	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit … The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia, complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
77	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class 16sqmmUG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc.(P. No. 555 / I.No. 16(b),BWSSB SR 13-14)	Work done upto the Billed Quantity and the Quality is satisfactory
78	Supplying and fixing of polished wood board made of not less than 15mm thick plank on both sides with planks made out of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws etc.,Size 20 x 20 x 2.5 inches with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the workcomplete as per specifications and directions of the Engineer in charg	Work done upto the Billed Quantity and the Quality is satisfactory
79	Borewell Cap and Clamp Set (PWD SR 2018-19, Page No. XLVII, Sl no. 17)complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
80	Supply and delivery at site brand New texmo/ innoval/ Lubi/ Sabar / Atalanta/ Calamal/ make suitable for vertical installation in 150mm dia bore well comprising of single stage or multistage CF pump close coupled by measns of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water (Wet type) squirrel cage submersible induction motor suitable for opertation of 3PH., 50 Hz, 380/440 volts AC supply fitted with required aqccessories such as suction, casing suction strainers sand guard Non return value etc. complete . The pump and motor shall form an integral unit with all the required fittings 17.50 HP 30 stage.complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

CIVIL Pro Sig..... Date..... BANGALORE

Scanned by TapScanner

81	Providing, laying & joining GI pipes confirming to IS specification of approved make with fittings such as collars bends elbows tees nipples plugs with cuts threads using white lead & threads for joints wherever necessary as per direction including all lead & lift etc,. complete 'A' grade(excluding cost of fittings) 50mm dia GI pipe B Class (SR 18-19 PWDcomplete as per specifications and directions of the Engineer in charge Qty Upto 125%	Work done upto the Billed Quantity and the Quality is satisfactory
82	Supply and fixing Collar for GI Pipes 50MM (page No.XLVII, Sl No.2,PWD SR 2018-19 complete as per specifications and directions of the Engineer in charge Qty Upto 125%	Work done upto the Billed Quantity and the Quality is satisfactory
83	Supplying of submersible pump cable 1X3X6 Sqmm complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
84	Supplying & delivery at site brand new / Essen / lotus sunsines/Adarsh/Gk controls best indigenous make combine energy meter-cum-control panel board unit of size 1200 x 600 x 300 mm minimum mechanically strong and vermin and water proof the unit shall have two detachable doors suitable for operation on 3ph,50Hz, 380/440 volts, AC supply with spring loaded latch locking with a key ribs should be provided inside the door canopy apron and louvers ventilators shall be provided the combine energy mtr cum control panel board unit suitable for operation on 3ph, 50Hz,380/440 AC supply shall be consisted etc., completed T panel board shall be fabricated on single unit in the above components panel board for suitable pumpset above components panel board for suitable pumpset above Up to 20HP with star delta starter (MR) complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
85	Supplying & delivery of brand 50mm Gate Valve. (PWD SR 18-19, complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
86	Supplying & delivery of brand 50mm Non Return Valve. complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
87	Supplying and fixing MCB complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

CIVIL Pro
Sig.....
Date.....

Scanned by TapScanner

88	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in Ordinary soil not exceeding 1.5m in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m after breaking of clods complete as per specificationscomplete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
89	Providing and installing at site of work 63mm (0.662) PVC Pipes of 6kg / cm2 including cost of pipes and specials and labour, including lowering into trenches, laying true to line, level and perfect linking at joints leak proof including joining of approved type with all labour and lift charges, handling charges including encasing the pipe alround to a depth not less than 15cms with gravel or selected earth available from the excavation etc., complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory
90	Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m and lift upto 1.5m including cost of all labour complete as per specifications complete as per specifications and directions of the Engineer in charge	Work done upto the Billed Quantity and the Quality is satisfactory

CIVIL Pro
Sig.....
Date.....

Scanned by TapScanner